



The History of the Football – The Actual Ball

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Materials: Football, Tissue

You watch football, you play football, but have you ever wondered why a football looks the way it does in the first place? The truth is that the American football's shape is the result of evolution (change over time) more than DESIGN (plan to make something). This PROLATE SPHEROID (egg shaped) ball did not look like it does now in the early years of the game. American football has a rich history, and like it's rules and the organization of the game, the shape of the ball has been MODIFIED several times over many DECADES.

What's the topic of today's lesson? FOOTBALL

When something changes over time we say it _____ . EVOLVES

This PROLATE SPHEROID are the words used to describe the football's _____
SHAPE

The truth is that the American football's shape is the result of evolution more than
_____ DESIGN

Name something about football – other than the shape of the ball – that has changed
over time. _____ RULES/ORGANIZATION

The shape of the ball has been _____ several times over the years. MODIFIED

What do you call a 10 year period? DECADE

The sport came about in the 19th-century (1800s) COLLEGIATE system in North America
by combining rugby and soccer. The first American footballs that northeast colleges
used were made out of inflated pig BLADDERS due to their semi-round shape,

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DURABILITY, (strong) and easy ACCESSIBILITY (easy to get.) In order to increase the lifespan of the ball, the pig bladder was ENCASED (covered) in CALFSKIN, sewn together, and laced tightly through eyelets to seal them up. These were also known as PIGSKIN balls even though they were made with the bladder, not the skin of a pig.

During what century did football begin? 19TH CENTURY/ 1800s

Name one of the 2 sports that were combined to make American football.

RUGBY/SOCCER

The first American footballs were made out of pig _____ BLADDERS

Name one of the qualities that made pig bladders a good choice for footballs in the 19th century. SEMI-ROUND SHAPE/ DURABILITY/ ACCESSIBILITY

To make a football, what were the pig bladders in encased in? CALFSKIN

What is a calf? BABY COW

What were the first footballs called? PIGSKINS



<https://www.timetoast.com/timelines/fot-1a-deanna-v>

<https://dailyapple.blogspot.com/2008/12/apple-356-footballs-shape.html>

When pig bladders were first used, the balls were mostly round, similar in shape to traditional balls. It is said that shape changed from round to OVAL as the result of an inter-collegiate football game between RUTGERS and PRINCETON in 1869. These two teams had to stop their game several times just to REINFLATE the football. This required reopening the leather encasing, reinflating the pig bladder, and sewing the encasing up again. The players got so WEARY (tired/Impatient) of this effort that they

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decided to continue playing with the semi-DEFLATED ball, which resembled more of an oval.

The shape of the football changed from round to _____ OVAL

Name one of the college football teams in the game the text discusses.

RUTGERS/PRINCETON

In what year was the football game the text refers to? 1869

The two teams had to stop their game several times just to _____ the football.

REINFLATE

The players grew _____ of this effort. WEARY

They decided to continue playing with the _____ ball. SEMI-DEFLATED



<https://mentallitch.com/the-history-of-the-football-the-actual-ball/>

In 1905, the FORWARD PASS was added to the rules of football. The number of FATALITIES and injuries throughout collegiate football games was increasing and organizers hoped that adding forward throws to the game would make playing football less DANGEROUS. This new rule which added the throwing the ball forced football creators to make the ball more AERODYNAMIC so it could be passed easily. When the

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changes were made, and the ball took on its prolate spheroid shape, it was much easier for the players to grip the ball with one hand and throw a perfect SPIRAL (spinning around a center point).

What was added to the game of football in 1905? FORWARD PASS/FORWARD THROW
The number of _____ throughout collegiate games was increasing.

INJURIES/FATALITIES

Organizers hoped that adding forward throws to the game would make playing football less _____ DANGEROUS

Football creators needed to make the ball more _____ AERODYNAMIC

Name something that is usually designed to be aerodynamic. AIRPLANE, HELICOPTER, DRONE, CAR

It was easier for players to grip the ball with one _____. HAND

It was also easier for the players to throw a perfect _____ SPIRAL

VAKT: Show how the ball moves in a spiral

VAKT: Try to throw a tissue and then throw a ball. Which is more aerodynamic?

Look at the picture below. This is what players in the 1800s would wear to play football. What piece of equipment, designed protect players from serious injuries, is missing?

HELMET

Concussions among football players are still very common. What changes could be made so they occur less often? Do you think people will support making changes in football so that it is safer? Why or why not?

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Players and organizers also were finding that the size and shapes of these original footballs were INCONSISTENT because every inflated bladder was different. So the inner pig bladder was replaced with vulcanized (chemical process) RUBBER, but its LEATHER encasing remained the same. The laces which were used to sew up the exterior encasing are still part of footballs today, but now they are there to help the players grip the ball. Overall, they kept the AESTHETICS (looks/appearance) of the ball the same but they STANDARDIZED the ball's shape and size.

Players and organizers also were finding that the size and shapes of these original footballs were _____ INCONSISTENT

The pig bladder was replaced with vulcanized _____ RUBBER

What do you call the material made out of animal skin? LEATHER

The stitching used to be to seal the encasing but now it is there to help the players _____ the ball. GRIP

Overall they kept the _____ of the football the same.

AESTHETICS/APPEARANCE/LOOKS

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The football makers _____ (made it the same) the size and shape of the football. STANDARDIZED

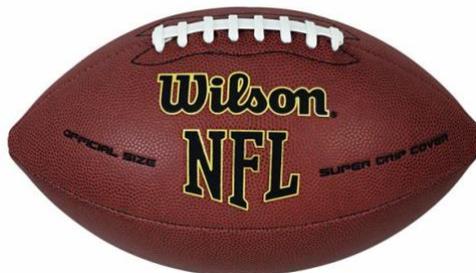
Up until the 1950s, all the balls that were used in the night games were white or had white stripes because there wasn't much stadium lighting back then, and white game balls increased the VISIBILITY. As stadium lighting improved, the NFL chose to use the stripe-less ball to DISTINGUISH itself from the business of college football. White stripes are still on footballs in college sports and other minor LEAGUES. Many people find that the stripes helpful when they are learning proper hand placement to grip, throw and catch the ball.

They used white game balls at night because they increased _____ VISIBILITY
The NFL now uses a stripe-less ball to _____ itself from college football.
DISTINGUISH

White stripes are still on footballs in college sports and other minor _____
LEAGUES.

Many people find that the stripes helpful when they are learning proper hand placement to _____ the ball. GRIP/ THROW/ CATCH

VAKT: Point to the picture below that would be used in professional (NFL) football?



<https://becomeacouponqueen.com/wilson-nfl-super-grip-football/>

<https://confessionsofasportscaster.blogspot.com/2017/08/another-year-fighting-college-football.html>

The official football of NFL is made by WILSON football factory in Ada, Ohio. The factory isn't AUTOMATED – as all the official game balls are HANDMADE by about 120 employees. The leather used to make the ball is sourced from cowhides from Nebraska, Iowa, and Kansas – it is then tanned with the company's "Top Secret" football tanning

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procedure. The ball is made up of four pieces of stamped leather and a SYNTHETIC bladder. The ball has a PEBBLE GRAIN texture for enhanced grip and increased friction. The encasing is also hand-laced with a single piece of vinyl without any knots. The Wilson Sporting Goods factory produces about 4,000 footballs each day.



THE OFFICIAL FOOTBALL OF
THE NATIONAL FOOTBALL LEAGUE

<https://www.forelle.com/american-football/balls/adult/wilson-wtf1758xbnf-nfl-throwback-32-team-logo/16998/>

What is the name of the company that makes the official football of the NFL? WILSON

What state is the Wilson factory in? Ohio

What do they call the process for turning animal skin into leather? TANNING

The footballs are not made with robots and computers, they are _____ by people. HANDMADE

From what state is the cowhide used in making Wilson footballs? NEBRASKA, IOWA, KANSAS

The Wilson factory refers to its tanning procedure as _____ TOP SECRET

The Wilson football is made up of four pieces of stamped leather and a _____ bladder. SYNTHETIC

How does the text describe the texture of a football? PEBBLE GRAIN

Name one purpose for the pebble grain texture. ENHANCED GRIP/INCREASED FRICTION

How many footballs does the Wilson Sporting Goods Company produce per day? 4000/
FOUR THOUSAND

Creative Writing

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Why do you think people value handmade items over things that are made through automation? Is there anything you think should always be handmade?

Like the football, almost everything around us evolves over time. What kind of changes do you imagine you may see in sports in the year 2050?



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Sources:

<https://mentalitch.com/the-history-of-the-football-the-actual-ball/>

<https://www.sportsnhobbies.org/were-footballs-ever-made-of-pig-skin.htm>

<https://www.sportsrec.com/do-college-footballs-stripes-7534480.html>

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